IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

MOSKOWITZ FAMILY LLC, Plaintiff, v. GLOBUS MEDICAL, INC., Defendant.	Civil Action No. 2:20-cv-03271

DEFENDANT GLOBUS MEDICAL, INC.'S SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF FOR THE TERM "CONNECTING SUPPORT STRUCTURE"

Pursuant to the Court's November 21, 2023, Order, ECF No. 319, Defendant Globus Medical, Inc. ("Globus") submits this supplemental claim construction brief regarding the term "connecting support structure."

I. Summary

Claim 1 of U.S. Patent No. 10,028,740 (the '740 Patent) has three limitations. Two limitations are directed to curvilinear nail screws, and the third limitation is directed to a "connecting support structure." The relevant claim limitation states:

> a connecting support structure defining a first hole sized and configured for receiving the first curvilinear nail screw and a second hole sized and configured for receiving the second curvilinear nail-screw such that the first curvilinear nail-screw is held with respect to the second curvilinear nail-screw with the first curvilinear nail-screw extending into the first vertebral body without penetrating pedicles and the second curvilinear nail-screw extending into the second vertebral body without penetrating pedicles

Ex. 1 ('740 Patent) at cl. 1. The only "connecting support structure" of any kind disclosed in the specification of the '740 Patent are rigid or jointed rods.

The claim construction dispute presently before the Court is whether the term "connecting support structure" is a means-plus-function term. If "connecting support structure" is a means-plus-function term, the Court must also decide what structure corresponds to the claimed function. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347-48 (Fed. Cir. 2015) (en banc in relevant part).

The parties have taken these claim construction positions:

Claim Term	Globus's Construction	Plaintiff's Construction
"connecting support structure" ('740 Patent, Claim 1)	This is a means-plus-function term subject to § 112(6) Structure: rigid connecting rods or flexible connecting rods	Plain and ordinary meaning

	Function: receive first and second curvilinear nail-screws into holes and hold them with respect to one another	

For means-plus-function terms, the claim describes a function but does not recite sufficient structure for performing that function. *Id.* For such terms, persons of ordinary skill in the art (POSITA) must look to the specification for the structure.[1] *Id.*; *accord* 35 U.S.C. § 112(6). For example, the Court construed the "means for engaging a [first/second] cancellous core" term in claim 1 of the '740 Patent as a means-plus-function term because the claim failed to disclose adequate structure for engaging the cancellous core—the term recited function only. ECF No. 143 at 14.

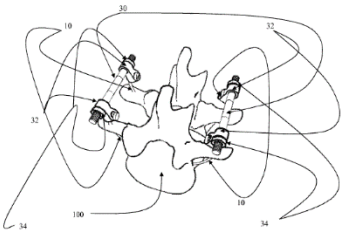
The term "connecting support structure" should be treated as a means-plus-function term as well. Claim 1 of the '740 Patent does not sufficiently describe the "connecting support structure." Ex. 1 at 13:54-63; *Williamson*, 792 F.3d at 1349. It says the connecting support structure has two holes, but it does not say anything else as to the "connecting" functionality. Ex. 1 at 13:54-63. Specifically, the claim does not state *what* is being connected or *how* anything is connected. Even assuming the two curvilinear nail-screws are *what* is being connected, the claims do not disclose *how* the two nail-screws are connected. A POSITA must review the specification to identify the structure that the inventor purports to claim.

[1] This means-plus-function requirement comes from 35 U.S.C. § 112(6) or post-AIA 35 U.S.C. § 112(f). In writing the statute with these requirements, "Congress struck a balance in allowing patentees to express a claim limitation by reciting a function to be performed rather than by reciting structure for performing that function, while placing specific constraints on how such a limitation is to be construed, namely, by restricting the scope of coverage to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof." *Williamson*, 792 F.3d at 1347-48.

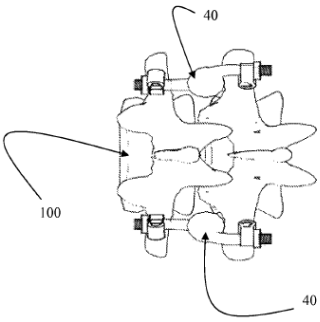
Further, and relatedly, the term "structure" is a nonce term. It's a placeholder that does not convey a specific meaning. The modifier "connecting support" does not add sufficiently definite structure to the nonce word. In other words, a POSITA would not understand, relying solely on experience and skill in the relevant field, the scope of the "connecting support structure." The structure comes solely from the specification.

Given that "connecting support structure" is a means-plus-function term, "connecting support structure" is limited to one of three things, as described in the specification: a rigid connecting rod; a ball-socket, side-side jointed connecting rod; or a ball-socket, head-head jointed connecting rod. Ex. 1 at 2:34-36.

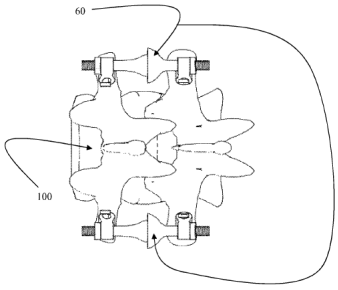
Rigid Connecting Rods



Ball-Socket, Side-Side Jointed Connecting Rod



Ball-Socket, Head-Head Jointed Connecting Rod



Globus's construction seeks to "tether the claims to what the specifications indicate the inventor actually invented." *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011). In contrast, Moskowitz seeks to broaden the scope of the invention to cover sophisticated products that the inventors never contemplated, and that a POSITA would never have understood the inventors to have claimed through the generic term "connecting support structure." Globus respectfully requests that the Court adopt its construction.

II. Argument

A. "Connecting Support Structure" Should Be Construed as Means-Plus-Function

Claim 1 does not provide any tangible structure for the "connecting support structure" other than to say that it has two holes that are "sized and configured" for receiving two curvilinear nail-screws. *Id.* The claim language discloses only functionality—i.e., that the "connecting support structure" receives two curvilinear nail-screws and holds them with respect to one another. *Id.* By claiming the "connecting support structure" using its functionality instead of sufficient structure, Moskowitz intended to limit the claimed structure to the three designs disclosed in the '740 specification under 35 U.S.C. § 112(6). *See Williamson*, 792 F.3d at 1347-48.

Moskowitz likely will argue that "connecting support structure" is not a means-plus-function term because the word "means" was not used. Although there is a presumption against construing a term as a means-plus-function term if "means" is not used, the presumption is not "strong." *Id.* at 1348-49. "[T]he essential inquiry is not merely the presence or absence of the word 'means' but whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for the structure." *Id.* at 1348; *see also Koninklijke Philips N.V. v. ZOLL Lifecor Corp.*, Case No. 2:12-cv-1369, 2015 WL 12781199 at *11 (W.D. Pa. Aug. 28, 2015) ("Regardless of whether a rebuttable presumption arises from not using the word 'means,' it is plain that the 'connecting mechanism' limitation in claim 16 should be construed as a means-plus-function limitation governed by § 112(f)"), *adopted*, 2016 WL 2983654 (May 24, 2016). The Court should construe a term as a means-plus-function term if the proponent "demonstrates that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Williamson*, 792 F.3d at 1348. "A 'critical question' underlying this inquiry 'is whether the claim term is used

in common parlance or by [skilled artisans] to designate structure, including either a particular structure of a class of structures.'" *Team Worldwide Corp. v. Intex Rec. Corp.*, Case No. 2020-1975, 2021 WL 4130634, at *5 (Fed. Cir. Sept. 9, 2021) (construing "pressure controlling assembly" as an MPF term). Since *Williamson* in 2015, the Federal Circuit has regularly applied means-plus-function treatment to disputed terms that lack the word "means." *See, e.g.*, *id.*; *Kyocera Senco Indus. Tools Inc. v. Int'l Trade Comm'n*, 22 F.4th 1369, 1379 (Fed Cir. 2022) ("lifter member" an MPF term); *Intelligent Automation Design v. Zimmer Biomet*, 799 F. App'x 847, 850-51 (Fed Cir. Jan. 30, 2020) ("control circuit" an MPF term); *Diebold Nixdorf, Inc. v. Int'l Trade Comm'n*, 899 F.3d 1291, 1298-1302 (Fed. Cir. 2018) ("cheque standby unit" an MPF term); *Advanced Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1347-48 (Fed. Cir. 2016) ("symbol generator" an MPF term); *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1371-72 (Fed. Cir. 2015) ("compliance mechanism" an MPF term).

Under *Williamson*, the term "connecting support structure" demands means-plus-function treatment because it is not a term used in common parlance in the field and fails to describe sufficient structure. The Federal Circuit has found that generic terms like "element," "device," and "mechanism" are "tantamount to using the word 'means' because they 'typically do not connote sufficiently definite structure.'" *Williamson*, 792 F.3d at 1351 (quoting *MIT & Elecs. for Imaging, Inc. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006)). For example, in *Koninklijke Philips N.V. v. Zoll Lifecor Corp.*, 2015 WL 12781199, the Western District of Pennsylvania followed the Federal Circuit's guidance and found the term "connecting mechanism" should be construed as a means-plus-function limitation. The Court explained that:

> Although the "connecting mechanism" limitation is not cast in "classic" "means-for" language, it is nonetheless believed that the limitation satisfies the underlying rationale for § 112(f). Namely, the "connecting mechanism" limitation, by its terms,

> would cover any "mechanism" performing the function of "connecting" that forms or creates an "electrical circuit" with the "energy source" and the "electrodes."

Id. at *16.

Similarly, here, the term "connecting support structure" could take on many different forms. The term "structure," like "mechanism," is a nonce term that does not connote a particular design. It is a generic word used to mean "something (such as a building) that is constructed."[2] And the prefix "connecting support" does not impart meaning into the term "structure." "Connecting" simply means "to become joined," and "support" simply means to "hold up or serve as a foundation or prop for."[3] Thus, like "connecting mechanism" in *Koninklijke*, "connecting support structure" simply discloses something that joins and holds up. *See also Team Worldwide*, 2021 WL 4130634, at *5 (opining that a "generic term . . . preceded by the functional descriptor . . . supports a conclusion that the term itself is purely functional."); *Kyocera*, 22 F.4th at 1380 (same). The entire term sets forth the same "black box recitation of structure" as if the term "means" had been used. *Cf. Williamson*, 792 F.3d at 1350. It forces the POSITA to look to the specification for the structure, requiring a means-plus-function construction. Globus's non-infringement expert, Michael Sherman, who has thirty years of experience in the medical device industry and is a named inventor on more than 120 issued patents, reviewed the claim language and agreed that only the specification, not the claim itself, provided any information about the structure of the claimed invention. Ex. 2 (Non-Infringement Report) at 44-46. Without tying the claim to the specification as § 112(6) requires, "connecting support structure" could mean any

[2] https://www.merriam-webster.com/dictionary/structure.
[3] http://www.merriamwebster.com/dictionary/connect;
http://www.merriamwebster.com/dictionary/support.

structure that can receive two nail-screws, including structures as wide-ranging as a bracket, brace, cantilever, beam, bar, rod, or lattice.

Second, the paragraph in which "connecting support structure" appears is in a format consistent with traditional means-plus-function limitations. The entire paragraph states: "a connecting support structure defining a first hole sized and configured for receiving the first curvilinear nail screw and a second hole sized and configured for receiving the second curvilinear nail screw such that the first curvilinear nail-screw is held with respect to the second curvilinear nail-screw with the first curvilinear nail-screw extending into the first vertebral body without penetrating pedicles and the second curvilinear nail-screw extending into the second vertebral body without penetrating pedicles." In this paragraph, Moskowitz has replaced the term "means" with the term "structure," tacked on a functional descriptor, and recited three functions performed by the "connecting support structure": (1) receiving the first curvilinear nail screw, (2) receiving the second curvilinear nail screw, and (3) holding the curvilinear nail screws "with respect to" one another. This is a means-plus-function term.[4]

B. The Only Structures Disclosed in the Specification Are Rigid or Flexible Rods.

"Once a court establishes that a means-plus-function limitation is at issue, it must construe that limitation, thereby determining what the claimed function is and what structures disclosed in the written description correspond to the 'means' for performing that function." *See Kemco Sales, Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 1360 (Fed. Cir. 2000). Here, there is no dispute

[4] Moskowitz may argue that the inventors did not intend for the term "connecting support structure" to be construed as a means-plus-function term because the inventors used the word "means" in the first two clauses of claim 1 but not the third. Even if the inventors' intent could be deciphered from this word choice, the lack of the word "means" does not overcome the fact that the claim does not "recite sufficiently definite structure" to enable a POSITA to understand the scope of the "connecting support structure."

as to the function of the "connecting support structure." It receives two curvilinear nail-screws and holds them "with respect to" one another. The dispute is around the structure, though the '740 Patent does not describe a structure other than rigid or flexible rods.

The specification for the '740 Patent discloses three designs for the "connecting support structure": (1) rigid connecting rods (Figures 4A and 4D), (2) ball-socket, side-side jointed connecting rods (Figures 5A and 6D), and (3) ball-socket, head-head jointed connecting rods (Figures 8A and 8D).

The written descriptions for Figures 4A, 5A, and 8A describe these structures in enough detail to enable a POSITA to replicate the design. This detail does not appear in the claim language, but it is necessary for the POSITA to understand the invention claimed in the patent. For example, the specification describes the rigid connecting rod as:

> a rigid HTCN connecting bar, which can be threaded on either end, two connecting bar links, which can couple the bar to each of the two HTCNs, and two tightening nuts on the outside of the connecting bar links, which can secure the connecting bar links and bar to the HTCNs. The connecting bar link can include a first (upper) perforation (e.g., opening, through-hole, etc.) that receives or engages a portion of the connecting bar, and a second (lower) perforation (e.g., opening, through-hole, etc.) that receives or engages a portion of the HTCN, such as the head of the HTCN.

Ex. 1 at 6:15-22. The specification describes the ball-socket, side-side jointed rods as:

> two inter-locking components that allow for movement. The inter-locking components can include, for example: a) a first hemi-rod having a distal end with a ball portion projecting from a side, and b) a second hemi-rod having a distal end with an accepting trough (e.g. socket) projecting from its side. The first hemi-rod can be coupled to the second hemi-rod in a ball and socket manner.

Id. at 7:10-21. And the specification describes the ball-socket, head-head jointed rods as:

> a ball and trough, head-head jointed connecting rod-HTCN construct (Embodiment III) that can provide a flexible fusion inserted bilaterally into the spine. . . . Once this is done, the threaded ball and trough, head-head jointed HTCN connecting bar then can be implanted into the superior perforations of the connecting link, with at least a portion of the threaded portion of the rod components protruding outside the connecting links. Then, the tightening nuts can be secured to either threaded end of the rod components of the connecting bar.

Id. at 9:15-35. Moskowitz never described the structure as anything other than "one or more interconnecting rigid rods, and one or more interconnecting jointed flexible rods." *Id.* at 2:34-36; *see also id.* at 1:28-30, 2:64-3:3, 4:17-23, 6:12-14, 9:61-10:5. The connection to the curvilinear nail screws is either "rigid or fixed in at least one degree of movement, or more than one degree of movement." *Id.* at 6:13-16. Therefore, Globus's proposed construction of "a structure that includes rigid rods or jointed flexible rods" accurately captures the disclosed structure.

Moskowitz may argue that Globus is improperly seeking to limit "connecting support structure" to exemplary embodiments. For starters, Globus is not relying on a single exemplary embodiment. Rather, rods are the *only* embodiments disclosed in the specification. The only structures disclosed are "rigid rod or jointed flexible rod positions on the posterior aspect of the spine." Ex. 1 at 2:6-9. Further, it is not improper to rely on embodiments when deciding the structure of a means-plus-function term. Section 112, para. 6 requires the Court to look to the specification (written descriptions and figures) to determine the structure of the claim term.

Construing the structure of the "connecting support structure" as rigid or joint flexible connecting rods is also consistent with how Moskowitz described its invention to the Patent Office throughout patent prosecution. *See Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996) (permitting analysis of "patent and its prosecution history" to construe means-plus-function term). For example, on February 12, 2018, the Patent Office rejected the then-current claim 1 as anticipated by Matityahu (U.S. Publication No. 2010/0016903 A1). Matityahu disclosed a rigid rod as a connecting support structure:

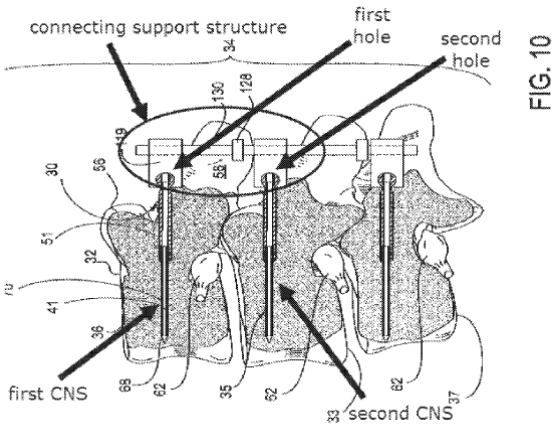


FIG. 10

Ex. 3 ('740 File Wrapper) at Moskowitz-000118. In response to the Patent Office's rejection, Moskowitz did not argue that the connecting support structure was something other than a rigid or flexible rod. Rather, Moskowitz amended the claim language describing the curvilinear nail-screw itself, without changing the claim language regarding the "connecting support structure." *Id.* at Moskowitz-000149, 155-56. Moskowitz never suggested to the claim examiner that the "connecting support structure" could be construed as anything other than a rigid or flexible rod, and it should not be able to make that argument here.

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For all these reasons, the term "connecting support structure" in claim 1 of the '740 Patent is properly construed as a means-plus-function term, where the structure is limited to what is disclosed in the specification—rigid or flexible joint connecting rods.

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CERTIFICATE OF SERVICE

I certify that on this 29th day of November 2023, I electronically filed the foregoing document with the Clerk of the Court using the CM/ECF system, which will send a notification of such filing (NEF) to all counsel of record.

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